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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,371	02/12/2004	Wayne T. Holcombe	P1996US	4589
8968	7590	09/30/2005	EXAMINER	
GARDNER CARTON & DOUGLAS LLP ATTN: PATENT DOCKET DEPT. 191 N. WACKER DRIVE, SUITE 3700 CHICAGO, IL 60606			SWERDLOW, DANIEL	
			ART UNIT	PAPER NUMBER
			2646	

DATE MAILED: 09/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/777,371

Applicant(s)

HOLCOMBE ET AL.

Examiner

Daniel Swerdlow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-16 is/are allowed.
- 6) ☒ Claim(s) 1-9, 17 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: In paragraph [0001] the filing date of provisional application 60/446,971 is incorrect. The correct date is 12 February 2003. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1 through 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 1 recites the limitation "the source of the PNP transistor" in the last two lines. There is insufficient antecedent basis for this limitation in the claim and because a PNP transistor does not have a source lead, it is unclear to which lead of the PNP transistor the recitation refers. To advance prosecution, examiner treats the claims on the merits based on the interpretation that the recitation is intended as -- the emitter of the PNP transistor--.

5. Claims 2 through 9 depend from Claim 1 and, therefore, incorporate the same indefinite matter.

6. Claims 1 through 9 would be allowable if amended to resolve the indefiniteness issues and reflect examiner's interpretation.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 17 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Scott et al. (US Patent 6,654,409).

9. Regarding Claim 17, Scott discloses a digital access arrangement including power supply circuitry comprising: a circuit node (Fig. 18, RING1) that corresponds to the first input/output pin claimed and is coupled to a phone line terminal T that corresponds to the first terminal claimed through a resistor R7 that corresponds to the first high impedance resistor claimed; a circuit node (Fig. 18, RING2) that corresponds to the second input/output pin claimed and is coupled to a phone line terminal R that corresponds to the second terminal claimed through a resistor R8 that corresponds to the second high impedance resistor claimed; and an active diode bridge circuit (Fig. 6B; column 13, lines 34-62) that corresponds to the polarity steering regenerative switch claimed and receives telephone line power (i.e., power from the first and second terminals via the high impedance resistors).

10. Regarding Claim 18, Scott further discloses a PMOS transistor (Fig. 6B, reference 642) that corresponds to the first PMOS transistor claimed and has a drain coupled to phone line

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terminal T that corresponds to the first terminal claimed via node 646 and a gate coupled to phone line terminal R that corresponds to the second terminal claimed via node 647; a PMOS transistor (Fig. 6B, reference 644) that corresponds to the second PMOS transistor claimed and has a drain coupled to phone line terminal R that corresponds to the second terminal claimed via node 647 and a gate coupled to phone line terminal T that corresponds to the first terminal claimed via node 646, and the sources of the transistors are connected together such that a voltage VDD is generated that corresponds to the idle supply voltage claimed.

Allowable Subject Matter

11. Claims 1 through 9 would be allowable if amended to resolve the indefiniteness issues and reflect examiner's interpretation of its meaning. See above under Claim Rejections *Claim Rejections - 35 USC § 112*.

12. Claims 10 through 16 are allowable.

13. Regarding Claim 1, hook switch circuits (also known as DC holding circuits, DC hold circuits and loop hold circuits) using PNP and NPN transistor combinations are well-known. See, for example: US Patent 6,498,825 to Dupuis et al. (Fig. 4, reference 1804); US Patent 6,587,560 to Scott et al. (Fig. 16, reference 1904, 2002, 2004); US Patent 6,876,742 to Sacca (Fig. 4, reference 320, 338, 340); US Patent 6,785,383 to Fan et al. (Fig. 2, reference Q1, Q2); US Patent 5,692,041 to Torazzina (Fig. 1, reference 3, 10, 12); US Patent 4,991,051 to Hung (Fig. 2, reference 24, 26); and US Patent 4,419,543 to Kelm et al. (Fig. 2, reference Q3, Q4, Q5). However, none of the prior art circuits disclose an arrangement with the emitter of an NPN

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transistor coupled to the base of a PNP transistor, a resistor coupled between the base of the NPN transistor and the emitter of the PNP transistor and another resistor coupled between the base and emitter of the PNP transistor. Further, there is no motivation in the prior art or in the knowledge of one skilled in the art to modify the well-known arrangements to achieve the claimed invention. As such, Claim 1 would be allowable if amended to resolve the indefiniteness and reflect examiner's interpretation of its meaning.

14. Claim 10 has limitations essentially similar to the allowable elements of Claim 1 and is allowable for the same reasons.

15. Claims 2 through 9 would be allowable due to their dependence from Claim 1.

16. Claims 11 through 15 are allowable due to dependence from Claim 10.

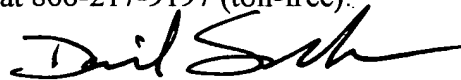
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Swerdlow whose telephone number is 571-272-7531. The examiner can normally be reached on Monday through Friday between 7:30 AM and 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh H. Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel Swerdlow
Examiner
Art Unit 2646

ds
28 September 2005